Tsr **Submarine basalt flows (early Eocene and late Paleocene)**— Dominantly aphyric to plagioclase phyric tholeiitic basalt; as closely packed pillow lava, columnar jointed sheet flows, and pillow breccia with flows up to tens of meters thick; basalt is in places amygdaloidal and tectonized, with vesicle and fracture fillings of greenish brown smectitic clay, calcite, quartz, and zeolite; commonly slickensided; flows locally massive and contacts poorly defined, except where interbedded with dark brown basaltic tuffaceous siltstone, turbidite sandstone, polymict conglomerate, and mudflow breccia. Flows are steeply dipping, tightly folded, and at least 6 km thick in Roseburg anticlinorium, with base not exposed; 8900' of basalt and basaltic breccia encountered in Sutherlin Mobil well; basalt is very vesicular, amygdaloidal, and oxidized (subaerial?) near bottom of well at TD of 13,177 feet. Upper part of unit interfingers with conglomerate of Bushnell Rock Formation; pillows locally surround and enclose well rounded clasts of Mesozoic rocks. Mudstone interbeds contain sparse late Paleocene (CP-8) to lower Eocene (CP10) foraminifers and coccoliths (D. Bukry, written communication, 1990-96; Ryu and others, 1992; Brouwers and others, 1995). Along the North Umpqua River near Glide (secs.17 and 18, T26 S., R.4 W.), a mudstone interbed near the top of the pillow basalts contains a foraminiferal assemblage of lowest Eocene age (Bulitian stage; or D stage of Almgren and others, 1988; McKeel, 1990, written commun.). Whole rock K-Ar dates for the Siletz River Volcanics from the Drain area and in the Coquille-Myrtle Point-Remote area just north and west of the Roseburg quadrangle range in age from 62.1 + 1.0 Ma to 59.2 + 2.8 Ma (Duncan, 1982). K-Ar dates of surface samples from these areas analyzed by Mobil Oil Corporation range from 47.2 Ma to 56.5 Ma (unpublished data, courtesy of Bill Seeley), with the youngest dates clustered in the Drain-Jack Creek-Dickinson Mountain area. 40Ar/39Ar analysis of a sample near the bottom of Mobil's Sutherlin well yielded an isochron age of 63.9 + 1.9 Ma (Duncan, 1982), close to K-Ar dates of 58.2 and 56.9± 1.5 Ma for basalt in Mobil's Sutherlin well at depths of 11,340 to 11,350 ft, respectively (unpublished data, courtesy of Bill Seeley). Paleomagnetic data from 19 sites in the Roseburg anticlinorium, Turkey Hill, and Coquille River area are all magnetically reversed (Wells and others, 1985 and this paper, Table X), suggesting eruption sometime during predominantly reversed Chrons 27 to 23 (62.5-51.8 Ma, timescale of Berggren and others, 1995).

Tsru **Subaerial basalt flows (early Eocene and late Paleocene)**— Crudely columnar-jointed aphyric and augite and plagioclase phyric flows with weathered and oxidized flow tops, locally with zeolite-filled vesicles and minor dark red oxidized siltstone interbeds; best exposed in railroad cuts across Turkey Hill-Dickenson Mountain anticline where flows overlie pillow basalt and are in turn overlain by fossiliferous basaltic sandstone

Tsrt **Basalt tuff (early Eocene)**—Massive to blocky and conchoidally fracturing, light gray, white to buff weathering basaltic aquagene tuff; locally displays bedding, with very fine laminations, scour and fill, and graded bedding; some outcrops contain beds of vesicular, altered basaltic glass lapilli and basaltic mudflow breccia. Interbedded with pillow basalt flows and Bushnell Rock Formation conglomerate containing a mix of basaltic and Mesozoic clasts. Interpreted to be submarine tuffs deposited on the flanks of growing oceanic islands in close proximity to the continent

Intrusive Rocks

Tidb **Diabase (early Eocene)**—Massive, blocky, to crudely columnar-jointed aphyric to plagioclase phyric, amygdaloidal, plagioclase-augite diabase and basalt; vesicles filled with greenish-brown smectitic clay, zeolite, and quartz; intrudes flows and sedimentary interbeds of Siletz River Volcanics and overlying Bushnell Rock Formation; locally hydrothermally altered along Bonanza fault zone; inferred to be co-magmatic with Siletz River Volcanics

△	DATE	REVISION	BY

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